Installation Manual

# RS485 Communications Card "OPC-F1-RS"

Thank you for purchasing the RS485 Communications Card OPC-F1-RS. Installing this card on your FRENIC-Eco series of inverters enables RS485 communication (via the RJ45 port for communication with a keypad) on the inverter plus the following expanded feature:

• Control from host equipment

This feature allows you to connect your FRENIC-Eco to host equipment such as a personal computer or PLC, so that the FRENIC-Eco can be treated as a device subordinate to the host.

Note The RS485 Communications Card can be connected neither to a keypad nor to PC loader.

Two communication protocols are available for the RS485 Communications Card: Fuji general-purpose inverter protocol and the Modbus RTU protocol. For details, refer to the RS485 Communications User's Manual (MEH448a or later).

## 1. Check that:

(1) An RS485 Communications Card is contained in the package.

(2) The RS485 Communications Card has not been damaged during transportation--no defective electronic devices, dents, or warp.

(3) The model name "OPC-F1-RS" is printed on the RS485 Communications Card. (See Figure 1.)

If you suspect the product is not working properly or if you have any questions about your product, contact your Fuji Electric representative.

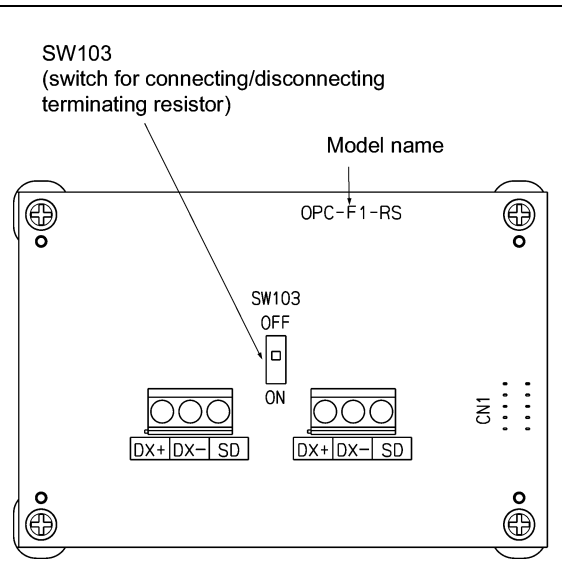


Figure 1 Front of Card

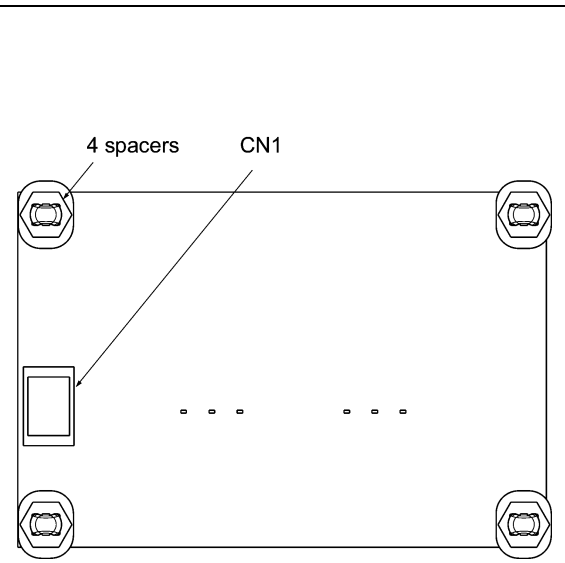


Figure 2 Back of Card



## 2. Installation

**⚠WARNING**

Turn the power off and wait for at least five minutes for models of 30 kW or below, or ten minutes for models of 37 kW or above, before starting installation. Further, check that the LED monitor is unlit, and check the DC link circuit voltage between the P (+) and N (-) terminals to be lower than 25 VDC.

**Otherwise, electric shock could occur.**

(1) If more than one inverter is connected in your network and you are going to install the RS485 Communications Card on the inverter at the network end, then be sure to turn SW103 (switch for connecting/disconnecting the terminating resistor) (shown in Figure 1) to the ON position. The factory default is OFF.

(2) Remove the cover from the inverter and expose the control circuit board (See Figure 3.).

To remove the inverter cover, refer to Section 2.3 "Wiring" of FRENIC-Eco Instruction Manual (INR-SI47-0882-E). For capacities of 37 kW or above, open also the keypad enclosure.

(3) Insert the four spacers and CN1 on the back of the OPC-F1-RS into the four spacer holes and Port A (CN4) on the control circuit board in the inverter (See Figure 4.).

Note Visually check that the spacers and CN1 are firmly inserted (See Figure 5.).

(4) Connect the associated cables between the OPC-F1-RS and the network.

For details of cabling, refer to RS485 Communications User's Manual (MEH448a or later).

(5) Put the cover back to the inverter.

To put back the converter cover, refer to Section 2.3 "Wiring" of FRENIC-Eco Instruction Manual (INR-SI47-0882-E). For capacities of 37 kW or above, close also the keypad enclosure.

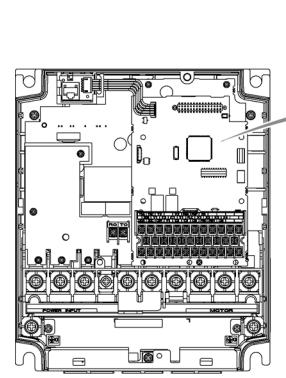

Figure 3 In the case of FRN7.5F1S-2J thru FRN15F1S-2J

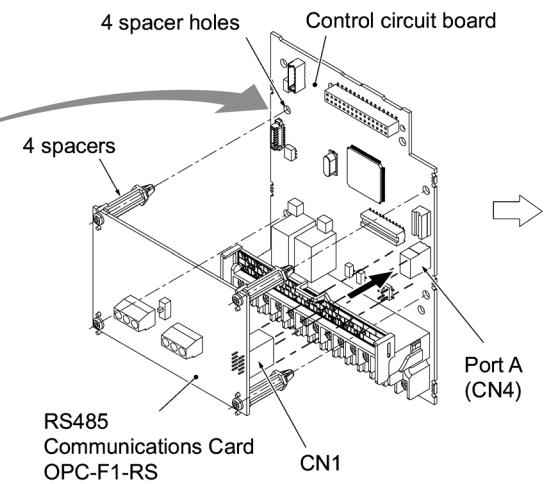


Figure 4 Mounting Communications Card

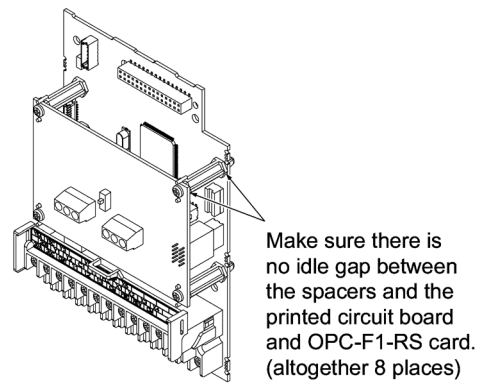


Figure 5 Mounting Completed

**Fuji Electric FA Components & Systems Co., Ltd.**

INR-SI47-0872